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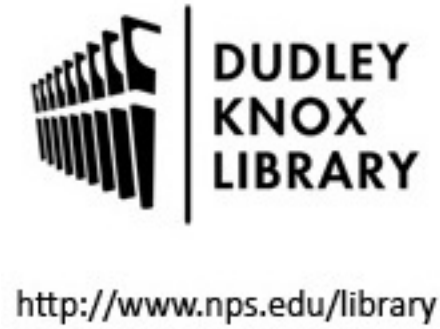

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THESIS

AN ASSESSMENT OF SELECTED PERFORMANCE OUTCOMES ASSOCIATED WITH THE DOD CAPITATION BUDGETING DEMONSTRATION (PILOT) PROJECT (1978-1981)

by

Kenneth Lorin Orloff

September 1981

Thesis Advisor: D. Whipple

Approved for public release; distribution unlimited.

Thesis
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In the early 1970's, rising military health care costs led to congressional interest in alternative health care delivery systems wherein efficiency and cost containment had been successfully demonstrated. As a result of a recommendation of the Military Health Care Study (1975), DOD developed and implemented a pilot capitation budgeting (CB) resource allocation system during 1978-81. During the subsequent evaluation, a contractor determined that

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This thesis independently assesses the extent to which results of the demonstration project were predictable. On the basis of theory and experience, a conceptual model for CB was constructed. Selected Pilot Project performance features and design elements were assessed against that model. The study concludes that the performance outcomes associated with the Project were consistent with project design and conduct limitations, and that a decision regarding the employment of CB in the Military Health Services System (MHSS) should not be based on project results.

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An Assessment of Selected Performance Outcomes Associated with the DOD Capitation Budgeting Demonstration (Pilot) Project (1978-1981)

by

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Lieutenant, Medical Service Corps, United States Navy
B.S., George Washington University, 1980

Submitted in partial fulfillment of the
requirements for the degree of

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September 1981

ABSTRACT

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I. INTRODUCTION

A. STATEMENT OF PURPOSE

The purpose of this research is twofold:

(1) To determine, if possible, whether the performance outcomes associated with the DOD Capitation Budgeting Demonstration (Pilot) Project (1978-81) were predictable and, therefore, the resultant conclusions foregone, and

(2) To analyze the Assistant Secretary of Defense (Health Affairs) tentative conclusion that capitation budgeting (CB) does not result in significant improvements over the traditional resource allocation system (see Appendix A).

B. SCOPE

A detailed analysis of Pilot Project performance over its three year life will not be attempted here. Both an independent contractor study and an in-house evaluation have been conducted by Arthur Young Company and the Capitation Budget Work Group, Office of the Assistant Secretary of Defense for Health Affairs, respectively. Given these analyses and the constraints imposed by limited time and other resources, this research effort will be limited to an examination of Project design, its conduct, and selected major findings and conclusions of the previously mentioned evaluations. The result will then be compared to a conceptual model of CB constructed earlier and founded on both theory and experience. Experience was derived from reports on the performance and conduct of health

care delivery systems employing CB--Health Maintenance Organizations (HMO's) (see Appendix B). Furthermore, reference to HMO's will apply primarily to the Prepaid Group Plan (PGP) experience.

C. BACKGROUND

In the early 1970's it was recognized that health care costs in the United States were rising at an alarming rate. Although inflation was experienced by American industry in general, health care and related service costs were, and remain, excessive compared to the overall economy [Ref. 1: p. 2]. This was especially true with respect to hospital costs which had more than tripled in the last decade [Ref. 2]. During that period, Military Health Service System (MHSS) costs also rose rapidly, thereby requiring a larger portion of the DOD budget. These rising private sector costs were primarily attributable to the absence of competitive market forces in the health care industry. Market reform was one of the policy avenues selected by the federal government and HMO's were selected as the model to achieve cost containment goals. As a result of increased Administration and Congressional interest in military health care costs, among other concerns, the Military Health Care Study (MHCS) was commissioned (1973) [Ref. 3: p. 3].

The study examined the HMO experience and concluded that successful control of costs could be achieved in the MHSS if a capitation budgeting approach similar to those employed by HMO's was adopted. Study recommendations included:

MHSS health care delivery planning for CONUS should be primarily based on the size and demographic characteristics of the population to be served.

Resource programming and budgeting for the MHSS in CONUS should be done on a capitation basis.

Resource programming for the direct care system and CHAMPUS should be integrated within DOD.

Costs per beneficiary should be developed and used as a measure of efficiency and performance. [Ref. 3: p. 9]

These recommendations formed the basis and purpose of the Capitation Budgeting Demonstration (Pilot) Project. The project itself was designed, in part, on the basis of PGP-Kaiser-experience. HMO's cost containment achievements were the primary impetus behind their selection as the model for the Pilot Project.

D. CHAPTER SYNOPSES

Chapter II will present a review of the current literature on CB, which is then defined and characterized. These findings will be used as a foundation for construction of a conceptual model of CB. In Chapter III the literature review will be extended and extrinsic conditions necessary to the successful implementation of CB will be established. These conditions, in concert with the definition and characteristics of CB, will complete the conceptual model.

Chapter IV will review and compare civilian sector HMO experience to determine the model's adequacy. Subsequently, in Chapter V the Pilot Project will be examined and compared to the model, and the extent to which necessary conditions

were satisfied will be determined. Finally, Chapter VI summarizes the findings, major conclusions and appropriate recommendations.

II. CAPITATION BUDGETING (CB) CONCEPT

The purpose of this research is to assess the performance outcomes associated with the DOD Capitation Budgeting Demonstration Project. First, it is necessary to answer the question, "What is Capitation Budgeting?" This section defines CB and identifies its salient characteristics. The description will provide a foundation from which a conceptual "model" capturing the essence of CB can be constructed.

A. DEFINITION

The literature disagrees about the definition of Capitation Budgeting. Apparently this is because the definition focuses on the health care delivery system with which it is most commonly associated--pre-paid health plans (PHP's) or Health Maintenance Organizations (HMO's). Specifically, the

> ...confusion occurs because the historical conception of HMOs as Kaiser Health Plan (or Ross-Loos) groups, the legislative definition of HMOs provided by PL 93-222, and the contemporary definition of HMOs as any prepaid health care delivery system, do not agree. [Ref. 4: p. 545]

Efforts have been made in both public (i.e., DOD) and private sector research to more precisely identify and define the concepts involved. The results of these efforts are reported, in part, here.

Basically, CB can be defined as a prospective (health care) reimbursement process, in which prepayment on a per capita, fixed-fee basis is employed without regard to utilization [Ref. 5,6: p. II-2]. This is a fixed-budget, population-based resource

allocation system as opposed to a historical workload-based one. Expanding on this theme, McKinsey and Company (1976) in their effort to develop and demonstrate a capitation approach to the allocation of DOD health care resources, defined a capitation budget as a system to establish overall health care resource limits on the basis of "...the predicted health care needs of the individuals comprising the beneficiary population, as determined by their demographic characteristics, and the size of the group to be served" [Ref. 7: p. 2]. Group size and demographic characteristics are specified because of their effect upon workload and level of need. Both can vary widely for a given population [Ref. 8: p. 3]. Wolinsky [Ref. 4] further noted that a fixed budget requires that all expenses associated with the provision of products or services must be met. Therefore, organizations, allocated resources through the CB process, prospectively receive targeted amounts with which they are expected to support their operations. It is clear that CB may also be defined as a management tool which can be used to affect both patient and health professional behavior.

Efforts to further refine the concept of CB require an understanding of the goals of those who choose to implement it and the way it is to accomplish those ends. Accordingly, an assessment of both the objective(s) and the theory of CB is appropriate.

1. Objectives and Theory

In the literature, there is general agreement about the objective(s) of CB. Without exception, cost containment

is reported as the major goal [Ref. 4, 9: p. 4]. The success of HMO's in achieving this objective as compared to traditional delivery systems is well documented [Ref. 10]. With respect to health care delivery, cost containment does not imply complete cessation of cost growth. Rather, the reference here is to the achievement of operational efficiencies that will ensure that organizational health care costs do not rise at a rate faster than that dictated by the growth in the enrolled (or catchment) population and the economy. In the macro sense then, we mean that health care costs should not exceed some target portion of GNP.

How is the objective of cost containment achieved? In its analysis of the DOD Capitation Budgeting Demonstration Project, the Office of the Assistant Secretary of Defense for Health Affairs (OASD (HA)) noted that "...the underlying theory of capitation budgeting used by civilian hospitals ... (is the) local optimization of resource use through mixing labor, capital, and equipment...." [Ref. 6: P. III-14]. This statement reveals three key conceptual elements. First, CB addresses the consumption of all health care resources, not one specific type such as dollars. This implies that in order to achieve the stated objective, all resources must be considered in the CB process and separate, isolated budgets cannot be permitted to exist. Whipple notes, "...the greater number of 'pockets' out of which ... resource costs must come, the less likely that the optimal choices of provider mix, mode of patient care delivery, etc., will be made" [Ref. 11: p. 4]. Second, the mixing of resources

to optimize their use implies that cost-effective trade-offs, for example capital-labor substitution, are employed for the most efficient and effective achievement of the goals of the organization given extant resource constraints. Third, "local optimization" implies that the "cost-effective trade-offs" will be accomplished at the operational or provider level. For this reason CB is a decentralized approach to resource allocation and reinforces the notion that physicians act as the central decision-makers with regard to the delivery of hospital care [Ref. 12: p. 1]. An appropriate definition of CB should include reference to a process that (1) programs all resources, (2) involves cost-effective trade-offs, and (3) reflects a decentralized approach [Ref. 11: pp. 5-6].

Before it can be assumed that the essence of the CB concept has been captured, a deficiency in the literature must be recognized. Luft [Ref. 10] in his research on HMO's, noted that, in defining prepaid systems, the literature generally ignores organizational variables that can affect performance. He mentions "the internal organization of the plan" in terms of "staffing ratios", "administrative structure", and "risk-sharing (incentive) arrangements" as one of those variables. In addition, Wolinsky independently concludes that the literature "...neglects key characteristics of the internal structure of those institutions (HMO's)...." [Ref. 4: p. 547]. Both researchers cite evidence of internal organizational structure variance between successful prepaid plans. Apparently CB is

not restricted to any single internal organizational structure and any attempt to adequately define it must consider the relationship between the two.

For our purposes, CB will be defined as an approach that optimally allocates all resources on a fixed, per capita basis. Further, it refers to a systemic, wholistic approach to the way in which resources are controlled and organizational elements are employed to achieve the efficient utilization and effective deployment of limited health care resources. Therefore, it does not refer to a budgeting technique alone but, rather, it refers to the broader activity of planning, programming and budgeting resources on the basis of demonstrated, per capita, service requirements [Ref. 3: pp. 85-6].

B. CHARACTERISTICS

Since CB is subject to a wide variety of diverse applications, no attempt to identify features peculiar to every conceivable health care setting or method of employment can be attempted here. Rather, only those characteristics of a general nature will be examined. As noted by Anthony and Herzlinger [Ref. 13] in their discussion of non-profit organizations, the effect of characteristics on the overall process will vary in degree; hence, they will more appropriately represent tendencies rather than pervasive, omnipresent characteristics. This view will be adopted for the purposes of this discussion.

The concensus problem faced earlier in attempting to define CB recurs here and is recognized in the literature. To begin

with, CB is characterized, for the most part, indirectly in terms of its employment in HMO's. In addition, different sets of characteristics are identified depending upon the purpose for which and by whom the characterization is made. For example, Wolinsky [Ref. 4] identified "design characteristics" (i.e., unlimited access to care, fixed budgets) in his assessment of HMO performance while Luft [Ref. 10], with the same purpose, identified behavioral characteristics separate and distinct, for the most part, from those above. As a result, no universal set of characteristics has yet been defined.

In order to establish a point of departure for this discussion and to develop a set of CB characteristics, the elements of the historical workload-based resource allocation system currently used by DOD in the Military Health Services System (MHSS) will be contrasted with elements of capitation-based systems.

1. Approach

The workload-based system employed by the military health services, in general, centrally manages and allocates resources to the operational level (field activities). Facility commanders lack local control over most funds and resources such as CHAMPUS, military manpower, investment equipment, etc. In addition, those few resources they do control are often subjected to centrally dictated constraints (e.g., civilian personnel and travel ceilings, maintenance floors, etc.). These elements constitute barriers to local flexibility and

to the local managers' ability "...to use their resources most advantageously...." [Ref. 8: pp. 2-3]. As previously noted, CB reflects a decentralized approach to resource allocation by placing emphasis on the local optimization of resources. As Whipple noted, "...CB is a measure designed to decentralize decision-making" [Ref. 11: p. 14].

2. Budget Method

The traditional budgeting system in the MHSS is a negotiated one. By emphasizing historical workload trends rather than size and demographic characteristics of catchment area beneficiary populations, it does not reward need [Ref. 7: p. 1]. Logically, it rewards those within the organization who possess greater leverage and negotiating abilities and lends itself to perverse manipulation. Under such circumstances, organizational slack in inefficient politicized facilities is funded and perpetuated. On the other hand, relatively more efficient facilities with genuine need, but little or no political leverage, may be penalized.

A population-based methodology consistent with CB is geared to service population changes and the full array of managerial concerns and responsibility. As a result, it rewards need on the basis of demonstrated per capita service requirements as opposed to political/system leverage. Furthermore, it can provide for periodic review and adjustment in response to population changes, management improvement opportunity and unforseeable need. Accordingly, it constitutes a formulated budget approach with a comparatively diminished potential for perverse manipulation [Ref. 8: p. 14].

3. Programming

Under the traditional approach, MHSS resources are, of course, programmed on the basis of historical workload. With this system, individual facilities can acquire "...more resources for the same number of beneficiaries by (a) treating them more frequently, (b) providing them more complex services, and (c) permitting longer rather than striving for shorter inpatient stays" [Ref. 7: p. 2]. This results mainly in increased use of inpatient care. Since the system is historically based, it "...strengthens the case for more resources--both operating and capital--for the future" regardless of necessity [Ref. 7]. Hence, the provision of cost effective care is discouraged.

With capitation budgeting, all resources are programmed on population-based forecasts of total 'demand' (anticipated utilization) as opposed to historical workload [Ref. 3: p. 6]. Prospective adjustment for population, inflation, utilization decreases and productivity increases can be employed, thereby assuring that necessity is more readily recognized and more appropriately addressed in the programming process. There is nothing here to suggest that CB is either inflexible or unresponsive as is readily apparent with the traditional methodology.

The issue of needs vs utilization vs demand merits brief examination at this point in order for the discussion of programming to be considered complete. For this purpose, needs will be considered as those services which should be demanded

(i.e., appropriate to the disease process or injury and generally determined by a professional); utilization, as those services that are actually delivered; and demand, as those services desired by individuals. Recall that the goal of CB is to minimize the cost of operations. Therefore, its focus is short-term and directed at utilization. This operational approach is consistent with the HMO experience wherein "the key to lower total costs ... seems to be in the lower hospital utilization rate" [Ref. 14]. Yet, in order to achieve the broader goal of minimizing the costs of providing care to eligibles, it is necessary for the system to (1) focus on "need"--that which should be provided--and health status in the long term, and (2) look at demand in order to assess the effectiveness of the health care benefit. In any health care system, then, the ultimate goal is to achieve that ideal state wherein need, patient perception of need and services rendered are synonymous. It must be decided which approach is to be adopted, and whether they are mutually exclusive.

If CB can deal effectively with present short-term goals compared to other methods, then it is a reasonable conjecture that such achievement does not limit its ability to deal with long term goals. That is to say, advocating CB does not imply an argument for a utilization approach over need or demand.

4. Inherent Incentives

Since the extant system is based on historical workload, it "...encourages local facilities to 'seek workload', particularly (more costly) inpatient workload ... and fails to

anticipate population changes in the resource allocation process" [Ref. 6: p. II-1]. As a result, workload-based methodologies can provide a disproportionate (excessive) share of resources to facilities with declining beneficiary populations and vice versa [Ref. 7: p. 1-3] (see discussion of programming above). Hence, the incentives inherent in the traditional approach to resource allocation in the MHSS do not support cost-effectiveness goals.

In discussing, without distinction, apparently inherent incentives, Luft [Ref. 10] noted, "HMO's operate with a markedly different set of incentives (from those associated with the conventional delivery system)...." Unlike those based on workload, population-based methodologies include inherent incentives to avoid overutilization and to provide the least costly mix of services [Ref. 12: p. 8]. These incentives result primarily from the "prepayment" feature of capitation and capitation-like plans. Reinhardt noted, "...it is the prepayment feature ... that yields the desired efficiency gains in prepaid group practices" [Ref. 9: p. 23]. Quoting him further,

> If health-care providers are paid for their services on a pre-paid basis ... their net economic position varies inversely with their operating costs. [Ref. 9]

And,

> The prepayment mode, however, is apt to force producers not only to produce given services efficiently, but also to search for the most efficient mix of services capable of maintaining the health status of patients at risk .... [Ref. 9][1]

---

[1]For a more detailed discussion of the prepayment feature, consult Whipple, Capitation/Incentive Project, Working Paper No. 1.

In addition to these advantages, the incentives provide a degree of resource security for managers and a lack of constraint on the choice of treatment [Ref. 12: p. 8]. Hence, management interference with clinical care requirements is neither implied nor intended.

The CB approach to resource allocation effectively eliminates the perverse incentives commonly associated with systems based on historical workload or other factors. For example, with "charge/unit of service" systems the incentive is to produce units more efficiently; however, no control over services rendered (as is implied with CB) is provided. Accordingly, total costs rise more rapidly [Ref. 15: pp. 14-15].

5. Consumer Choice

Eligibility for care in the MHSS is based on legal entitlement. Eligible beneficiaries may or may not choose to receive services at anytime during their eligiblity period. In addition, some beneficiaries maintain and use alternate forms of coverage such as private health insurance. The impact of these factors on utilization will be discussed in the following chapter.

Given these considerations and the absence (to date) of a fully operational enrollment program, it is not possible to ascertain if, and to what extent, consumer commitment exists in the system. Also, the opportunity to measure overall program performance using consumer satisfaction data such as flow in and out of the system, is foregone.

On the other hand, voluntary enrollment is a primary feature of the typical HMO.

> ...When enrollment in the Health Plan is offered to groups, there will be those who find other health care arrangements more appealing. By insisting that at least one alternative form of health coverage is offered each individual within a group, Kaiser-Permanente makes certain there is an element of mutual consent upon which to build a doctor-patient relationship. Moreover, the Program was built in a barometer to indicate how well members' expectations are satisfied, because every group subscriber may change to an alternative plan should he or she become dissatisfied. [Ref. 16]

The ability to select a desired program or plan involves the consumer in the resource allocation decision-making process with respect to his own care and gives a "...perception of the true value of such a ... benefit to those receiving it" [Ref. 11: p. 20].

6. Competition

As noted in the Introduction, normal buyer-seller relationships and competitive market forces do not apply to the health care industry in general, and, specifically, to a non-market structure such as the MHSS. With the traditional approach, the physician provider bears no financial consequences as a result of his/her purchase decisions and, therefore, has no incentive to consider costs much less to actively pursue their reduction. Because the system is based on historical workload, it leads to unhealthy competition in the sense that facilities/providers compete to increase utilization so that they may

claim an ever-growing proportion of the available limited resources. Therefore, deficiencies in the (non)market structure are amplified under a workload-based methodology.

The contrary is true in a CB resource allocation system. The Congressional Budget Office in a recent study noted that the promotion of competition results both from increasing consumer awareness of costs of medical services and from the presence of incentives to reduce hospital costs [Ref. 17]. CB accomplishes both of these objectives.

With respect to purchase decisions, Whipple posits that CB creates provider-risk by transferring to them a portion of the risk faced by the organization [Ref. 18: p. 3]. Risk transference encourages providers to scrutinize care requirements more judiciously to ensure that only necessary services are provided and the least costly mix of those services is pursued. Luft noted, HMOS "...alter the usual economic incentives ... and give providers a stake in holding down costs" [Ref. 10: pp. 507-508]. In summary, CB can be characterized as a system which creates and provides substitutes for deficient or missing market forces and helps achieve market reform.

C. SUMMARY

Although there exists no universally accepted definition for, or set of characteristics applicable to, Capitation Budgeting, the literature provides adequate foundation from which both can be derived. For the purposes of this analysis, CB will refer to (1) a system that optimally allocates all resources,

prospectively, on a fixed, per capita basis; (2) a wholistic, systemic approach to the way in which resources are controlled and their consumption is influenced; and (3) the broad activity of planning, programming, and budgeting resources to achieve their efficient utilization and effective deployment.

Further, the characteristics of CB will include:

1. a decentralized approach;
2. a formulated budget method;
3. resource programming on population-based forecasts of anticipated utilization;
4. the elimination of perverse incentives;
5. consumer choice;
6. a substitute for missing or deficient market forces.

Given this conceptual foundation, the next logical step is an assessment of conditions that are necessary to the successful implementation of CB. The following section will address this requirement.

III. NECESSARY CONDITIONS

Given the characteristics and objectives presented in the previous section, it is necessary to determine which, if any, conditions must be present in order for CB to function successfully. To that end, a literature search has been conducted, and the results of that effort are presented next.

A. RESEARCH FINDINGS

Evidence to support the presence of pre-conditions necessary for CB appears in the recent literature. In his effort to examine "...the possibility that cost containment might result solely from the implementation of capitation budgeting", Whipple observed, "...there is no reason to expect cost containment as an automatic consequence of using CB" [Ref. 11: p. 7]. The implication here is that there exist elements other than CB itself with which an organization both employing CB and desiring cost containment must be concerned. The following conditions will refer not to elements inherent in CB, but rather to environmental factors such as structure, capabilities, relationships, and the like, which may affect the way in which, and the extent to which, cost containment goals are achieved. Discussion will focus on the health care setting in which CB is or would be employed.

The key to identifying necessary conditions is related to the construction of a conceptual model capturing the essence

of CB. Intuitively then, a developmental relationship between potentially valid conditions and the conceptual model foundation presented in the previous section should be established. Therefore, it is assumed that the key to determining necessary conditions is the conditions' compatibility with the objectives, theory, and characteristics of CB as previously defined. Working within this constraint, one researcher (Whipple) has identified conditions posited as necessary to the successful implementation of CB in the MHSS. As Principle Investigator for the Capitation/Incentive Project (Department of the Navy), his efforts to provide micro-policy direction for the successful implementation by the military services of a proposed CB test and evaluation project resulted in the initial identification of necessary pre-conditions. These pre-conditions were based, in part, on a review of "...the operational characteristics, costs, and incentive structures of both the concept of prepayment and CB and the actual experience of those plans using CB" [Ref. 9: p. 3]. Since these findings are MHSS-specific and appear to be consistent with the compatibility goal stated earlier, their review here is both pertinent and appropriate.

B. CONDITIONS

In the following subsections, each stipulated condition or set of conditions will be individually synopsized and discussed, and a case will be made establishing its necessity by expressing or implying the expected result should a condition be absent

or deficient. In addition, since the necessary conditions identified by Whipple are expressed as recommendations in his Final Report, they will be identified as such when presented here. The report states,

> The ordering of the recommendations has no necessary intended relationship to either importance or implementation since we have taken a holistic view of the problem and thus perceive the proposed course toward its solution in the same light. [Ref. 9: p. 2]

Given the above and lacking rational evidence for another course, no effort to rank order these conditions in either a temporal or authoritative sense will be attempted. However, it must be recognized that in failing to address the rank order issue here, an order is inferred. That is to say, by neglecting the issue, one attributes equal weight to each condition thereby resolving the issue indirectly and without rational support.

1. Total Systems Cost

> Recommendation #1: Total systems costs for the region must be included in the capitation budget and funneled through a regional authority.
>
> Although there are many facets to this proposal, the major import is that, to be effective, the Budget authorizations from DoD should be to Triservice, Regional Authorities, and should include the CHAMPUS cost allowance for the catchment population as well as the Military Personnel costs for those assigned to elements of the MHSS in that area. [Ref. 11: p. 2]

Here and in his analysis, Whipple addresses several key issues. Total cost, a key concept in this condition is, for the most part, self-explanatory. If the goal of cost containment is to be achieved, a capitated budget must "...accurately reflect the cost of operation...." [Ref. 11: p. 4]. Therefore,

in the military, a capitated budget should necessarily include the costs of financing programs (i.e., CHAMPUS) and military health care providers and staff in addition to all other costs. As Whipple suggests, action to "...segregate portions of those costs and make them 'uncontrollable'" effectively precludes the opportunity for managers/providers to make those 'cost-effective trade-offs' necessary to the attainment of cost containment goals [Ref. 11: p. 4]. For example, if CHAMPUS dollars are excluded from the capitated budget, facility commanders could "...either 'cap' or shed inhouse workload ... at no cost to their operating budgets" [Ref. 6: p. III-19]. Accordingly, facilities/providers can employ CHAMPUS as a "no cost safety valve" by shifting workload to it. The costliness of such uncontrolled out-of-plan utilization is well recognized in private sector pre-paid plans [Ref. 11: p. 5].

Consider the cost of military health care providers and staff. The "...substitution of less expensive providers...", along with other labor saving innovations, provides "...one of the largest potential sources of cost containment in health care delivery systems...." [Ref. 11: p. 6]. If, however, such costs are not included in the capitated budget, "...then the incentive to discover and implement these labor cost saving innovations is almost non-existent" [Ref. 11: p. 6]. As a result, the opportunity to inculcate cost containing behavior in consonance with CB objectives is thwarted.

The final point to be made regarding Recommendation #1 concerns the reference to a Tri-Service regional budget based

on the total eligible population. Because, as proposed, the budget given to a region is Tri-service and population-based, it makes available to that regional authority the same cost-effective trade-off opportunity--but on a potentially grander scale (i.e., between regional facilities)--heretofore associated with providers and individual facilities. Hence, optimal allocation at the regional level can also be achieved. This is accomplished, in part, by reducing the potential in a workload based system for individual facilities to successfully double-count beneficiaries in overlapping catchment areas, and by removing the ability of those same facilities to negotiate directly with the central manager for extra resources based on those contested clientele [Ref. 11: p. 6]. At this point it is worth noting that a regional management approach has been closely associated with successful prepaid group plans in the literature [Ref. 19].

To summarize, the concept of a total cost, Tri-Service, regional, capitated budget is in apparent complete harmony with the conceptual model of CB alluded to in the previous chapter. Further, it is conjectured that the conditional nature of such a budget approach with respect to the successful implementation of CB has been appropriately established.

2. Incentive Structure

Recommendation #2: There must be effective direct and indirect monetary incentives provided at the field command and operational levels.

To foster cost containment we must be willing to share the fruits of these efforts with those most responsible for their realization. This means the implementation of innovative and effective fringe benefits for

> the managers and providers who have daily responsibility for the decisions which determine resource utilization. [Ref. 11: pp. 2-3]

The concept of economic incentives and their employment in the health care sector is recognized in the literature. "...the general idea expressed is that economic incentives should prompt economical practice patterns on the part of physicians" [Ref. 20: p. 29]. As a result of his research of private sector prepaid health plans, Whipple proposes that it is, in fact, the physician bonus--"...a positive, although weak, incentive to substitute ambulatory for inpatient care...."--in tandem with the removal of the perverse incentive to hospitalize patients that results in the relatively cost effective care experience associated with those plans [Ref. 11: p. 7]. But as Whipple further notes, the MHSS is not presently in a position to take advantage of this proven incentive since "...the organizational structure of the MHSS precludes ... even weak direct monetary incentives for physicians ..." [Ref. 11: p. 7]. In addition, he further warns "...there are few, if any, endogenous incentives for the managers of these (MHSS) facilities to seek out lower cost methods of care, to monitor utilization, etc., just because of a change from WB (workload budgeting) to CB" [Ref. 9: pp. 18-19]. The solution he proposes, in part, is the provision of "...organizational change in the form of improved incentives" [Ref. 18: p. 26]. He is not alone in his support of this position. Altman and Weiner in their work on regulation and competition agreed and noted, "The most important way that incentives should be changed is

an explicit organizational strategy that concentrates on behavior within the hospitals" [Ref. 21: p. XV].

The key, then, to this proposed condition is to design an incentive structure to accompany the use of CB, the goal of which should be "...to force the objective of individual decision-makers in the system to be the minimization of the cost of providing the prespecified levels of care to the given population" [Ref. 18: p. 30]. In keeping with the concept of CB developed earlier, such an incentive structure must sufficiently put the managers and providers at risk to motivate cost consciousness. To that end, Whipple proposes a system of fringe benefits tied to performance for both providers and managers with the potential to discipline or relieve the latter for inefficient or unacceptable performance [Ref. 18: p. 29]. This proposed system both reflects and supports the necessary direct relationship between incentives and performance.

Before this discussion can be considered complete, two points should be examined. First, Whipple's proposed condition expressly includes the provision of cost saving incentives for managers at all levels. In order to promote and sustain cost containment behavior, participants in the generation of cost savings, regardless of their organizational level, must share in the realized benefits directly and in proportion to their contribution.

Secondly, there is the quality of care issue occasionally broached in the literature with regard to cost conscious health care delivery systems such as those employing CB. In

response to that concern, the literature points to internal quality assurance programs as the appropriate controls to prevent underutilization. In part as a result of these review procedures, the literature reports that the quality of care in organizations employing CB, as perceived by both patients and providers, is equivalent to and often better than that experienced in the traditional fee-for-service system [Ref. 10].

Therefore a definitive organizational incentive structure, which motivates and sustains cost containment behavior, meets the criteria of a necessary condition established earlier in this chapter. Whipple's conclusions regarding this point adequately summarize the assessment conducted above.

> The point is that both theory and reality as surveyed ... indicate clearly ... that it is naive to expect significant (in terms of effects), continuing cost containment efforts without the provision of endogenous, visible, and reasonable incentives. [Ref. 11: p. 10]

3. Decentralized Management Structure

Recommendation #3: Managers and decision-makers at the field level must be given substantially increased authority to pursue cost-effectiveness.

> We cannot tie the hands of those to whom we have given a mandate to cut costs. We must be willing to grant them broad new power to affect the day-to-day management decisions and innovations which will lead to cost containment. [Ref. 11: p. 3]

This condition refers to management flexibility and is completely consistent with the local optimization theory stipulated earlier. They are both predicated on the principle that providers and field level managers are, for the most part, in a better position to recognize and implement cost-effective trade-off opportunities than are central decision-makers [Ref. 18:

p. 3]. Furthermore, this condition implicitly recognizes that the existing management structure must provide a supportive framework for positive organizational incentives. Relating these two points, Whipple argues,

> The salient point which must be emphasized is that CB is ... unambiguously associated with decentralization of decision making authority and responsibility. It is impossible for CB to yield any significant benefits in terms of cost containment if those who are receiving the now capitated budget are constrained from making cost-saving decisions (and taking the responsibility for them) which may yield the cost savings hoped for. [Ref. 18: p. 3]

In addressing the extent to which this 'delegation' must occur, Whipple states,

> What is necessitated is the vesting of decision-making authority at the lowest level consistent with the required level of organizational control, information costs and availability, and competence. [Ref. 11: p. 14]

Hence, decision making authority and responsibility should be delegated downward to that level in the organization at which cost effective trade-off opportunities both exist and can be optimized. In this way, the necessary relationship to cost containment goals is established. Whipple, addressing that relationship, concludes "...the use of CB is an admission that centralized decisions are in general too costly (in many senses)" [Ref. 11: p. 14].

At this point, it should be noted that the concept of decentralized decision making does not necessarily restrict itself to the delegation of authority and responsibility within an organization. Rather, it suggests the presence of a management structure that is compatible with and supportive of that

process. Jones confirmed this point in his research on decentralization in the MHSS. He wrote that

> ...decentralization rests on the need to have an appropriate organizational structure, relevant relationships and specific policies (in support of decentralization) which are known and thoroughly understood by management personnel ... as well as ... sufficient consideration given to managerial incentives and performance measures. [Ref. 22: p. 31]

Given, then, that we are addressing a decentralized management structure, it is appropriate to recognize and define key structural elements that have been previously neglected.

First, there exists the requirement for an objective performance appraisal system at both the provider and inter-facility levels [Ref. 18: p. 18]. This requirement relates directly to the CB concept of accountability [Ref. 1: p. 9]. Specifically, a system of objective performance indicators must necessarily accompany any resource allocation process that purports to reward competent management or penalize or remove incompetence. The literature suggests a number of measures and levels of measurement to include physician and hospital utilization and cost per beneficiary (see both Whipple and Wolinsky). In its absence, no equitable way of operating a reward or penalty mechanism at either the provider or facility level exists [Ref. 23]. Furthermore, as Whipple noted (quoting Bauer and Densen), "...where there are (no) clear performance standards to measure the end results of care ... there is likely to be a push to cut quality standards" [Ref. 9: p. 26].

Another structural element is considered by Whipple.

> The importance of management initiative in developing and providing accurate information to the appropriate decision makers is difficult to overstate. [Ref. 18: p. 34]

The pursuit of cost containment objectives infers the necessity for the provision of timely as well as accurate information. Intuitively, providers and managers cannot be expected to identify and take advantage of cost saving opportunities without information to facilitate the accomplishment of that task.

Is the case for consideration of decentralized management structure as a necessary precondition adequately established? The research of Kochen and Deutsch provides evidence in support of this issue.

> Our analysis ... leads us to propose that the following general design principles underlie the organization of a cost-effective, client centered service organization:
>
> (1) Communication channels should be two way, to facilitate feedback, and short, to allow for immediate responses.
> (2) Communication channels ... should be protected against excessive costs of (a) errors, (b) abuses, and (c) overloading.
> (3) ...decisions should be delegated downward to the lowest level where they can be adequately made....
> (4) Clients and third parties substantially affected by the outcome should be involved in the making of decisions. [Ref. 24]

So it appears that the contention regarding the necessity for a decentralized management structure is supported. But, is it confirmed with respect to health care delivery systems? As a result of his research, Jones [Ref. 22] noted that decentralization (as opposed to centralization) may be the optimal organizational structure for health care entities operating in a universe characterized by dynamic environmental conditions.

Whipple completed the discussion of a decentralized management structure when he noted in his analysis of system structures,

> ...the emphasis that successful private sector plans placed on the 'management' input of operational personnel and ... the general failure of MHSS central administrative personnel to perceive the relationship between the successful use of CB and this field level management input. [Ref. 18: p. 2]

Management input implies the full array of management activities cited above.

In view of the above, it is speculated that a decentralized management structure is a condition requisite to the successful implementation of CB. Such a structure employs organizational concepts consistent with and supportive of the incentives system and goals that characterize the CB approach to resource allocation. The previous conjecture that CB is not tied to any particular internal organizational structure is not violated here. Decentralization can be achieved in a variety of ways and organizational settings reflecting facility-specific relationships and structural characteristics.

4. Enrollment

Recommendation #4: A true enrollment system must be implemented with the eventual allowance of "dual choice." An accompanying "patient satisfaction monitoring system" must be developed and implemented.

> We must accurately identify the eligible population in the catchment area and "eliminate the uncontrolled use of CHAMPUS by 'enrolling' the group who will be utilizing the MHSS direct care." This implies that at some point in time we must for many reasons provide these enrollees with at least a dual choice as is done in every private sector HMO. To assist in motivating satisfactory provider/client relations and thus avoiding significant outflows of enrollees from the direct care system, a simple, but effective, patient satisfaction

> monitoring system must be implemented as part of the facility-level management information system in order to facilitate appropriate management interventions when problem areas surface. [Ref. 11: p. 3]

If a per capita approach to resource allocation is employed, as with CB, the ability must exist to accurately predict the demand for services generated by any catchment population. In order to accomplish this, "...reliable data concerning (1) the population being served and (2) the rates at which services are being utilized by that population" are required [Ref. 25]. An enrollment system is the most commonly and successfully employed method of gathering that data in the private sector experience [Ref. 16].

The implication with respect to this recommendation is that the enrollment system will accomplish more than a simple head count. Since the key to cost reductions according to HMO experience has been lower utilization of hospital services, information on size of the served population alone (regardless of accuracy) will be of limited value. The process of enrollment provides an opportunity to gather the demographic information necessary to ascertain probable utilization patterns and, thus, to predict resource needs more accurately [Ref. 11, 14]. In addition, enrollment addresses the issue of access control and out-of-plan utilization. It establishes a "commitment" on the part of the consumer to seek necessary services from within the system. Penalties are employed when unauthorized out-of-plan utilization occurs. Therefore enrollment and the commitment it creates act to discourage out-of-plan utilization.

Where this condition is allowed to flourish relatively free of control, such as in the MHSS, over-programming of resources is likely to occur [Ref. 11: p. 20]. The combined negative effect of out-of-plan utilization on health care costs is, therefore, readily evident. The points expressed above are brought together by Whipple.

> The ability to assist in controlling costs of the health care delivered to a given population ... depends in large part on definite knowledge of the population for whom the plan or system is responsible and a major degree of control over the utilization of those eligible. [Ref. 11: p. 16]

The patient satisfaction system referred to in the original recommendation reflects the need for information relative to the behavior of enrollees and the performance of facilities/providers as perceived by those enrollees. The interdependent relationship of this system with respect to previously mentioned conditions such as information needs, performance appraisal and the like, is clear and requires no further elaboration.

In closing the discussion on enrollment, one point needs clarification. Nothing presented here is intended to imply that the entire beneficiary population must be made captive. For contingency purposes, only active duty personnel need be considered as such. The suggestion is that in order to be cost-effective the system must constrain patients from going back and forth from MHSS direct care to CHAMPUS at the expense of the delivery system. Initially, mandatory participation may be necessary but, eventually, the concepts of

consumer choice and copayment can be employed to restrict and control undesired behavior [Ref. 11].

To conclude then, an enrollment system coupled with the eventual allowance of dual choice appears to be a condition necessary to the successful implementation and operation of CB.

5. Rate Setting Methodology

Recommendation #5: The "capitation rate setting methodology developed must reward efficiency and motivate cost containment." Thus, an objective set of performance indicators must be developed and integrated into the budget decisions. [Ref. 11: p. 3]

The ability to develop and use a base capitation rate which can be adjusted, as needed, for changes in the demographic makeup of the service population will not be at issue here. The key to this proposed condition appears to rest with the idea that the capitation rate setting process is an ideal way in which to systematically influence the resource consumption patterns of both facilities and individual managers and providers. In order to achieve the potential this process suggests, it is necessary to develop "... an objective, equitable, and efficient adjustment mechanism ... (to be used) in conjunction with the basic rate setting methodology to allocate the always insufficient (with respect to the MHSS) total or central budget among the competing regions (facilities)" [Ref. 11: p. 24]. As the literature points out, efficiency must be objectively rewarded in the budgeting process rather than penalized or ignored [Ref. 11]. Consider, for example, the reality of funding shortfalls. Under the present system,

efficient organizations are penalized unfairly and unequally compared to less efficient organizations. This phenomenon is attributable to the increased availability of administrative slack with which inefficient organizations can absorb and survive funding shortages. As a solution to this problem, Whipple proposes "...the construction of a set of facility/region Performance Indictors", which would facilitate the objective incorporation of the facility (region) manager's performance into the final rate setting process [Ref. 11: p. 25]. Since this process is, in part, performance-based, arbitrary budget allocation decisions can be minimized.

Given the discussion above, a capitation rate setting methodology which rewards efficiency, motivates cost containment and incorporates performance into the rate setting process appears consistent with and necessary to the primary objective of CB--cost containment.

C. IMPLICATIONS

The proposed conditions appear to represent something other than disconnected, independent actions. Rather, they appear to suggest a necessity for systemic structural change on the part of centralized, workload-based organizations wishing to achieve cost containment through the implementation and employment of CB. In support of this claim, Whipple observed that the singular adoption of CB in the MHSS without the institution of "necessary systemic structural change" will not result in any change in terms of cost containment

[Ref. 9: p. 3]. He bases his contention on his observation that the MHSS lacks a consistent and sufficient set of management/operational incentives [Ref. 9: p. 3].

Therefore it is hypothesized that the suggested and desired synergistic effect of these conditions can only be achieved through the adoption of systemic structural change.

D. SUMMARY

As a result of a review of pertinent theory and experience, it is postulated that there exist certain conditions which must be present if CB is to achieve cost containment. These conditions are,

1. A total cost, regional, capitated budget;
2. An organizational incentives structure which motivates and sustains cost containment behavior;
3. A decentralized management structure to include attendant information and performance appraisal systems;
4. A beneficiary enrollment system coupled with the eventual allowance of dual choice; and
5. A capitation rate setting methodology which rewards efficiency, motivates cost containment and incorporates performance into the rate setting process.

These conditions and the synergistic effect they suggest, taken together with the definition and characteristics developed in Chapter II, provide a conceptual model of capitation budgeting for application to the further purpose of this research. However, before this model can be accepted as a basis against

which to examine a system, it is necessary to ensure that it adequately represents reality. To that end, the following chapter will address realistic experience in an attempt to support or disclaim the proposed conceptual model.

IV. OTHER FACTUAL EXPERIENCE

In order to determine the adequacy with which the constructed conceptual model reflects reality, it is necessary to examine those plans employing CB in non-DOD health care settings. In general, an effort will be made to identify valid variation in the actual implementation of CB. Specifically, this discussion will examine inconstancy, if any, in the form or function of conditions assumed necessary in the previous chapter. It is proposed that through this process, the extent to which the conceptual model sustains experience can be ascertained. The literature will be used as the basis for this examination.

Since conditions proposed as necessary to the implementation of CB were previously derived from reported theoretical and experiential research, only minimally necessary effort to repeat previously presented information or to redefend those conditions will be made. The purpose of this discussion, then, is three-fold: first, to determine if variance in the way in which CB is implemented in other settings exists; then, to determine the nature and extent of such variance through synopsis and discussion; and, finally, to determine the implications, if any, such variance may hold for the conceptual model.

A. VARIANCE

The literature reports a considerable amount of variance with regard to HMO structure and performance; however, not

without some disagreement [Ref. 4,10,14]. As previously discussed, there are problems with both the data and consensus on the part of research findings from the field. Specifically, there is, at present, a relative paucity of data with respect to actual HMO experience relative to 1930, the beginning of prepaid, capitation-based experience. That which does exist is often contradictory [Ref. 4]. In addition, the approach research takes in addressing variance is mixed. For example, much of the research that has been accomplished is directed at identifying variance between HMO's in general and fee-for-service health care delivery systems. That which is limited to HMO experience generally dwells on variance between broadly divergent types--Prepaid Group Plans (PGP's) and Individual Practice Associations (IPA's)--rather than focusing on specific ones. For the purposes of this assessment, it will be necessary to glean from the literature the part which refers to variance within the PGP category. A useful approach is to highlight those findings by author. For this reason, each subsection below will feature the consequential findings and conclusions of various recognized research in that manner.

1. Wolinsky

In his effort to assess the performance of HMO's, Wolinsky reviewed the "...nine most often cited reviews of the HMO performance literature;" and "...analytically review(ed) the recent literature evaluating the performance of HMO's" [Ref. 4: p. 537]. As previously noted, his general conclusion was that the data and conclusions reviewed were quite varied

and contradictory. He focused on the variance of structural incentives and disincentives that influence the delivery and consumption of health services. He identified eight different HMO types according to their different sturctural configurations, pointing out that "...not all HMO's are alike nor is it simply a case of PGPs versus IPAs" [Ref. 4: p. 547]. He went on to note that this primary form of variance had been "...seriously overlooked in each of the most often cited reviews of HMO performance" [Ref. 4: p. 547].

Wolinsky did point out specific differences in structural incentives. For example, he noted that group model PGPs where physicians have a proprietary interest, experience a statistically significant increase in the number of days of hospitalization per 1000 member than do staff model PGPs, where physicians' services are contracted on a straight salary basis and where they are without proprietary interest. Presumably, this difference is the net result of differing internal structures and associated incentive systems. In looking specifically at risk variance among plans, he noted that:

> Although by definition all HMO's are at risk for hospitalization ..., the true extent of an HMO's risk and the manner in which it employs incentives to reduce hospitalization (and thus reduce costs), vary considerably. [Ref. 4: p. 550]

As an example, he noted that some HMO's may stress the increased use of preventive ambulatory or outpatient care to reduce hospitalization rates. Other methods used by different HMO's include pre-admission certification (peer review) or restrictions on the supply of hospital beds thereby apparently reducing

the amount of discretionary caseload that can be handled. As a result, he further notes that hospitalization rates within categories of PGPs will vary considerably as a result of both different incentive levels and the ways in which they are employed.

2. Luft

This researcher also challenged the generality of both data and conclusions presented to date. He noted that although some evidence on variance issues exists, "...there are few studies available and the material should be considered at best exploratory" [Ref. 10: p. 524].

As a result of his research, he was able to identify a broad range of variance. He observed that the comprehensiveness of guaranteed services varied widely among plans and beneficiaries. He also noted that the defined populations served by HMO's vary widely. The enrollee turnover rate varied among plans. Presumably, turnover can, in part, represent patient dissatisfaction with the plan. However, the extent to which the system considers and employs this tool also varies. In addition to turnover, the served populations vary in terms of their homogeneity. Some plans solicit and treat a representative cross-section of their surrounding communities, whereas others may serve specific groups only. This may result from selective solicitation on the part of an HMO which desires to serve or avoid a particular category or categories of people, or from sponsorship such as unions, industry, student groups and the like.

Luft also looked at variance in enrollment and consumer choice. He noted, "The degree of freedom of choice in enrollment also varies ... because of limited access to other providers or modes of insurance" [Ref. 10: p. 505]. The implication of such circumstances on consumer commitment and satisfaction and on the competitiveness of plans is apparent.

Luft further noted that:

> The structure of HMO coverage also shows great variation. Health Meaintenance Organizations may use cost-sharing to varying degrees, and several types of cost sharing may be involved. [Ref. 10: p. 505]

His findings included reports of coinsurance rates ranging from zero to 25 percent and deductibles from zero to $25. This reflects the variance in financial risk that is borne by both plans and enrollees. It should be noted that regardless of level, financial risk is present and acts as the primary incentive for all parties. Further, with regard to risk, Luft noted that the exposure to risk varied among HMO's in general. Specifically, some HMO's are not at risk for hospital services. Consumers may be required to maintain separate, conventional coverage for hospital care. Others may place providers at risk for total utilization including ancillary services as well as hospital care. Lastly, he noted variance in organizational structure similar to that which was identified by Wolinsky.

As a result of the above, Luft concluded:

> ...Because every HMO has some unique features, no evaluation can fully identify to what extent the performance of a specific HMO relates to its general characteristics and to what extent to its special features. [Ref. 10: p. 506]

This measurement problem must be recognized and extends to the ability of the present research to accomplish its purpose.

3. Whipple

As noted in the previous section, Whipple performed much of the original work with respect to micro-policy guidance applicable to the implementation of CB in the Navy Medical Department. As a result of his research, he was able to identify variance in the way in which CB is employed in the civilian sector. For example, he noted broad variance in the incentive structures employed by the different plans he examined. This variance appeared, in part, in the form of compensation and incentive payments to providers. Some bonuses to providers were tied to productivity, but others were uniform for all providers. Profit sharing also varied with some providers sharing excess revenues at the end of the period while others drew salaries alone. Compensation for non-physician providers also reflected variance. In some plans, these individuals were paid out of capitation funds and shared in the savings in staffing costs generated as a result of their employment. In other plans they were paid by physicians who, in turn, capitalized on dollar savings generated as a result on that portion of their capitated bugets.

Whipple also noted that, "The role of 'management' varied among the different plans...." [Ref. 18: p. 4]. These include active management roles in which a combination of

incentives and controls are wielded to keep costs in line, as well as more passive roles with management depending on systemic incentives and maintaining few controls.

The variation in provider risk was noted in other ways. In some instances providers were at risk for most services rendered, however, in other cases, provider risk excluded ancillary services. Ancillary services are often speculated to be a primary factor in the rapid and continued rise of hospital costs.

Capitation rate setting methods were also shown to vary. Some plan premiums were directly derived using nationwide staffing ratios and utilization rates adjusted for local prices, demand, and other forms of income. Other plans used extensive systems of calculations to derive their rates which, according to Whipple

> ...appears to be in violation of the spirit and supposed efficiency of capitation budgeting since the capitation rates are, in each case, determined by many calculations which should be minimized in this system. [Ref. 18: p. 38]

Whipple also noted instances of yearly upward adjustments based on previously established rates, and prospective subscription rate setting based on projected costs and revenues in which plan physicians subjectively determined the physician mix necessary.

In addition, Whipple noted variance in performance measurement systems. Some plans employed subjective, informal systems which were heavily dependent on evaluations by superiors, however, other plans employed more objective measures such as productivity [Ref. 18].

4. Enthoven

In his research, Enthoven [Ref. 26] focused on both organizational structure and competition. With respect to variance identification, his effort appears to be related to both ownership and proprietary status. With respect to ownership, he noted three separate categories: not-for-profit (NFP); physician-owned for-profit; and, consumer-owned cooperatives. He noted that NFPs had no powerful incentive to minimize costs since their focus was not on per capita costs but, rather, on a target percentage of the costs of the fee-for-service competition. He also observed that since for-profit plans had proprietary interests, their focus would be on strong financial incentives. Finally, he noted that consumer cooperative incentives caused members to act in their own short-run best interests. Therefore, the incentives brought into play depend, in part, on ownership and its relation to cost containment goals.

B. IMPLICATIONS

What inferences can be drawn from the broad range of organizational and functional variance in HMO's presented by these research findings? It would appear that the variance itself is a reflection of both the external and internal environments which are at work constantly in any HMO. Furthermore, although variance exists, it appears that the conditions necessary for the conceptual model are present. Without these

conditions, a system would be employing an alternative health care resource allocation system lacking the requisite CB basics.

C. SUMMARY

This section reviewed the variance of actual experience with the proposed conceptual model. It was concluded that the model represents adequately the HMO (CB) experience. Given that determination, it is now necessary to compare the DOD CB Demonstration Project with that model to determine if performance outcomes associated with it were predictable.

V. THE DOD PILOT PROJECT

It is now necessary to examine the DOD Pilot Project to determine if, and to what extent, it incorporated the conceptual model's characteristics and necessary conditions. This is necessary to determine whether the Project satisfied enough of the necessary conditions to be called an adequate test of CB. The additional purpose of this examination is to determine the extent to which Project outcomes were predictable. To accomplish these goals, the conduct of the project, project design and selected major findings of the evaluations conducted by both the OASD Capitation Budget Work Group and the Arthur Young Company will be discussed. This discussion will focus on Project objectives, methodology and limitations.

A. OBJECTIVES AND METHODOLOGY

The objective for the Pilot Project as defined by the contractor responsible for its design was to,

> ...develop a capitation budgeting methodology encouraging replication of thrusts observed in private prepaid groups which would successfully:
>
> (1) Promote greater use of ambulatory care;
> (2) Lower the frequency of use and duration of hospitalization; and
> (3) Lower the total cost of care for the MHSS (including CHAMPUS).
>
> [Ref. 6: p. III-3]

The contractor determined that in order to accomplish these it would be necessary to change the way budgets are developed in a manner that complemented rather than replaced the

traditional resource allocation system. The contractor adopted an approach that:

> Emphasizes future changes in the size and demographic composition of catchment area beneficiary population, rather than changes in population size and historical workload.
>
> Expands the dimensions of managerial concern and responsibility to include:
> all health care resources, regardless of source; and
> additional management considerations, such as trade-offs between CHAMPUS and direct care, trade-offs among direct care appropriations, and the management of utilization rates and staffing relative to workload (i.e., productivity)....
> adds managerial flexibility and authority that is needed at facility level to pursue these objectives. [Ref. 6: p. III-4]

To achieve these ends the contractor designed a test methodology that was,

> ...based on a transference of several aspects of the private sector prepaid group practice concepts, ..., to the MHSS budgeting system. It attempted to adapt the concepts of population, utilization, productivity, and the prospective development of resource requirements. [Ref. 6: p. III-8]

The methodology was based on projections of prior year's expenses to which adjustments for one-time expenses, population size and mix, and inflation were added. The basic budget that resulted could then be adjusted for projected utilization rate and productivity changes, as appropriate. In addition, unlimited trade-offs between resources were possible since a total resource perspective was employed during the budget process. Specifically, the methodology was "...designed to answer the question of whether or not it it useful to prepare facility budgets on a capitated basis" [Ref. 6: p. III-8].

The Project tested both regional and local facility level funding. This occurred in Regions 1 and 7, respectively.

B. PROBLEMS, LIMITATIONS AND DEPARTURES

1. Methodology

From the outset, restrictions and limitations plagued the Project. For example, the test was restricted to the budgeting process. Therefore, it failed to address the concepts of planning based on population size and demographic characteristics, as well as programming on a capitation basis, both of which were proposed by the MHCS and were, therefore, the purposes for this undertaking. Furthermore, neither the integration of Direct Care and CHAMPUS resource programming nor the development of cost per beneficiary as an inter- and intra-facility efficiency and performance measure was accomplished. These, too, were recommendations of the MHCS and apparent purposes of the Project [Ref. 6: p. IV-5]. The Capitation Budget Work Group cited additional methodology limitations.

> ...the Test was limited to the lowest organizational level--the medical treatment facility....no single command had the opportunity to allocate resources among all its facilities on a capitation basis ... (and) test facilities were not initially exempted in any way from normal (traditional) budgeting, information system and control procedures. [Ref. 6: p. III-5]

These limitations further restricted the scope of the test and diminished the extent to which necessary conditions were satisfied. For example, maintaining traditional reporting and control procedures led to added administrative workload, a significant disincentive. In addition, it fueled the

participants' belief that they were really being funded through the traditional budget process and, therefore, that the Project was a riskless paper exercise for which a strong commitment was neither necessary nor fruitful [Ref. 6,27].

2. Regional Capitated Budget

A regional approach was tested in two different phases. The first phase (FY79) consisted of a regional overlay to the traditional chain of command. This approach coupled with a poorly positioned regional management led to termination of this portion of the test. A revised regional effort took place in FY80 with disappointing results. The primary problem was that the regional resource allocation body avoided difficult allocation decisions which resulted in both untimely and unresponsive funding actions [Ref. 6].

Arthur Young Company [Ref. 27] in their independent evaluation noted that there were several reasons for the regional aspect's poor performance. First, the impact of the Project design on the traditional command and control structure was not fully evaluated in the conceptual phase. Further, necessary organizational requirements and operational guidance were not built into the test. And, finally, the regional approach was not fully supported in concept by all test participants due to service bias. The contractor concluded that the necessary system changes to support CB did not occur.

3. Incentives System

The incentive structure as operated was deficient and failed to remove disincentives associated with the traditional

workload method. The fact that CB and the traditional method were operated simultaneously during part of the three year test is a prime example. Under such conditions, necessary behavior change could not be expected. Additionally, the incentives actually provided were, in many cases, prevented from achieving their potential. For example, as an incentive, facility commanders were authorized to purchase capital equipment using funds generated as a result of operating efficiencies. However, this authority was not provided until late in the exercise, an arbitrary limit on capital equipment unit price was imposed, and purchase was restricted to cost-effective equipment which generally implies a one year recovery of costs. These limitations removed the incentive and no conclusions could be drawn regarding any potential benefits [Ref. 6: p. III-32].

4. Decentralized Management Structure

Elements of centralized, micro-management were retained during the test. For example, control over military assignment and resultant payroll costs remained unchanged and at the Service level. This hampered a facility's ability to enact and, therefore, its willingness to identify desirable cost-effective resource substitutions [Ref. 6: p. III-14].

Additional centralized control was evidenced during attempts to transfer expensive CHAMPUS workload inhouse--a major mechanism for reducing total MHSS costs. In some instances, local commands identifying these potential cost-savings were

required to submit, in advance, extensive documentation to support the proposed workload shift. These proposals required first Service, then regional, approval prior to their enactment. This usually resulted in time and opportunity lost [Ref. 28].

Additional restrictions on local authority were applied. Although CHAMPUS and military department O&M funds were comingled during FY 1978 and FY 1979, "...transfer approval was held at the operating command level...." and not at the facility level [Ref. 6: p. III-17].

The necessity for adequate and accurate information also went unfulfilled. Cost, workload, staffing, utilization, productivity, and population data were not uniform across all Services, all facilities, or all test years. Collateral information systems were neither responsive nor fully in place. Demographic information on beneficiary populations were estimated and not accurately known. Both Direct Care and CHAMPUS utilization data were lacking, inaccurate, and untimely. In addition, only macro data, not related to the providers individual specialty, was available thereby inhibiting the providers ability to budget for utilization changes. CHAMPUS cost data suffered from the same deficiencies.

Information system problems extended to productivity data as well. Productivity data consisted of comparative staffing ratios for individual functions and for peer groups. These proved to be abstract and misunderstood, especially at

the facility/provider levels, and of little meaning in the budget development and execution process. This resulted primarily from the "...absence of relevant standards of comparison" [Ref. 6: p. III-12].

Performance standards, in general, were lacking. Both meaningful utilization and productivity measures and standards were neither adequately developed nor incorporated into the facility management budgetary process [Ref. 6,27].

5. Enrollment

Although the Defense Eligibility and Enrollment Reporting System (DEERS) was underway in the MHSS, it was neither uniformly present nor fully operational at anytime during this three year test. This, in part, accounted for the paucity of accurate population and demographic information that characterized the test.

Furthermore, out-of-plan access controls were not improved over those available under the traditional system. This applied specifically to CHAMPUS outpatient care which, by legislation, is freely accessible to eligible beneficiaries. The savings that did accrue, resulted from the increased use of extant inpatient access controls. And finally, consumer choice was not tested; therefore, resultant consumer commitment and the ability to measure patient satisfaction were absent [Ref. 6,27].

6. Systemic Change

A comprehensive approach to the demonstration of CB was never attempted [Ref. 27: p. 2]. During its operation,

the test never fully incorporated those elements of the capitation approach for which it was responsible. Arthur Young Company noted,

> The full test methodology, including management flexibilities and regionalization, was not available to be adopted until FY80, the year our study was conducted. [Ref. 27: p. 4]

This situation clearly inhibited the extent to which necessary systemic change could occur and be measured.

C. CONTRACTOR CONCLUSIONS

Since the OASD(HA) Capitation Budgeting Work Group's conclusions were similar to, and in part based on, contractor conclusions, this discussion will focus chiefly on major conclusions of the contractor.

Primarily, the contractor concluded,

> The capitation budgeting project did not provide a fair and adequate assessment of the three concepts tested--capitation budgeting, management flexibility, and regionalization. [Ref. 27: p. 2]

This conclusion was based on findings of test design and implementation problems which were compounded by "...unresolved difficulties in meeting operational requirements in the design" [Ref. 27: p. 3]. Further, the contractor was unable to attribute to the CB system, conclusively, changes in facility performance. They stated,

> It became apparent during our evaluation that the "basic problem" to be addressed by DOD in the health care arena is the optimal allocation of all resources (manpower and dollars, including CHAMPUS) to meet the demands of the beneficiary population. Further, it became apparent that the solution will not be achieved by changes, no matter how radical, to the medical treatment facility budget development

methodology, nor by the addition of selected management flexibilities to motivate improved efficiency.

> Piecemeal solutions such as these áre too narrow in scope to address properly the entire problem and cannot simply be superimposed on an existing system which in many respects is not supportive of the new concepts. Any attempt to resolve the allocation of resources issue must first address the characteristics of the present system and its related impact on health care delivery planning, programming, budgeting and execution.
>
> [Ref. 27: p. 7]

Resolution of the allocation of resources issue must consider systemic structural change. This point was supported by the Work Group's conclusion that,

> ...the test methodology and supporting management data did not provide the means to systematically manage utilization or induce a professional commitment to it. [Ref. 6: p. III-11]

These results lead to the contractor's major conclusion that,

> The test conducted in medical treatment facilities did not address all concerns of the overall project and cannot serve as the basis for a decision to end the project or to implement a new budgeting methodology CONUS-wide. [Ref. 27: p. 2]

D. IMPLICATIONS

In response to the question, "Did the Pilot Project satisfy enough of the necessary conditions established by the conceptual model to be called an adequate test of CB?", the answer is clearly negative. The above-mentioned findings of fact and conclusions support no other conclusion. Although some test efforts were directed at those necessary conditions, others were not. Those that were addressed, were accomplished in an inconsistent and muted fashion. Accordingly, it is apparent

that the Pilot Project was not a sufficient test of CB, nor as it was designed, could it have been.

E. SUMMARY

In this section the findings and conclusions of both an in-house and an independent contractor evaluation have been presented. These were compared with the necessary conditions applicable to the conceptual model, and it was speculated that both project design and conduct precluded a sufficient test of the Capitation Budgeting resource allocation process.

VI. SUMMARY AND CONCLUSIONS

A. SUMMARY

The stated purpose of this research was twofold:

1. To determine, if possible, whether the performance outcomes associated with the DOD Capitation Budgeting (Pilot) Demonstration Project were predictable and, therefore, the resultant conclusions foregone, and

2. To analyze the tentative conclusion of the Assistant Secretary of Defense (Health Affairs) that CB does not result in significant improvements over the traditional resource allocation system.

To accomplish these two purposes, the literature was reviewed and a conceptual model was constructed from both theory and reported experience. This model was based on the concept and inherent characteristics of CB and was further strengthened by extrinsic conditions determined necessary to the fulfillment of cost containment goals. Subsequently, non-DOD health care systems employing CB were examined, and it was concluded that the model adequately represented their experience. Finally, Pilot Project design, its conduct, and major findings and conclusions of both in-house and contractor evaluations were examined. It was concluded that the Project did not satisfy enough of the necessary conditions to be called an adequate test of CB.

B. CONCLUSIONS

Both the model and the findings of this analysis lead to the conclusion that the results of the Pilot Project were predictable and consistent with both Project design and conduct. Systemic structural change necessary to the successful implementation of CB in the MHSS was never achieved. The traditional authority structure, which lacks necessary local management flexibility, was essentially retained. Facility commanders were not given the necessary authority to fully realize cost-effective trade-off potential. Total system costs were never under the control of those expected to contain costs, nor were all resources. Adequate information and incentives necessary to control utilization were not available. Inter-facility, intra-facility, and provider performance measures and standards were lacking, and ignored in the rate setting process. Each of these factors diminished the incentive system implicit in CB to a level consistent with that employed in the traditional workload-based approach.

Furthermore, the concerns of the Military Health Care Study, which led to the Project's conception, were never fully considered. The test methodology limited itself to budgetary concerns and ignored the total resource allocation process.

Finally, consider the Capitation Budget Work Group's argument that the MHSS is not a suitable environment to support a CB methodology [Ref. 6: p. IV-1]. This contention is based on results of the Project which have been shown to be the

predictable outcomes of its design and conduct limitations. The contractor for Project design and implementation noted that the MHSS possesses elements common to many civilian-sector plans employing CB. For example, it is a large, managed system; it is prospectively budgeted; its physicians are salaried; and its beneficiaries are well covered for outpatient as well as inpatient services. Given these basic, key similarities, it is apparent that the workload-based approach to resource allocation and its legislated restrictions, including personnel caps and multiple isolated budgets, are at the center of our inability to hold down expenditure growth. It is, therefore, concluded that the MHSS is not unsuited to capitation budgeting and that the Project's failure to incorporate necessary systemic, structural change makes it appear otherwise.

C. RECOMMENDATION

Based on the findings and conclusions presented above, it is recommended that a decision regarding the employment of CB in the MHSS not be based on Project results.

APPENDIX A

Decision on Capitation Budgeting Project[1]

MEMORANDUM FOR THE DEPUTY SECRETARY OF DFENSE

SUBJECT: Decision on Capitation Budgeting Project
ACTION MEMORANDUM

The DOD/OMB/HEW Health Care Study, 1975, proposed adoption of a per capita approach to planning, programming and budgeting in CONUS health care facilities with the objective of reducing or containing costs while preserving quality of care.

In response to the study, DoD elected to develop and test a capitated budgeting system prior to making a decision on whether or not and how to implement such an approach. A civilian contractor (McKinsey & Company) was retained in FY 1977 to develop a capitated system and in FY 1978 began testing the concept at 13 selected DoD medical facilities representing the three military departments. The test has continued to the present. In March 1980, Arthur Young and Company was retained by contract agreement to perform an evaluation of the test results to assist in deciding the future of the concept. Their Final Report has been received and reviewed. Based on that evaluation and the comments/positions of the military departments and in coordination with the Assistant Secretaries of Defense (Comptroller) and (Manpower, Reserve and Logistic) we conclude: (1) The methodology and regional management aspects tested do not result in significant improvements over the traditional budgeting system, and (2) The management flexibilities included under the test such as the integration of CHAMPUS/O&M-direct funds and removal of civilian end-strength limitations deserve further study if they indicate potential for improved operations. These conclusions are based on the discussion and analysis at TAB A. A Copy of the Arthur Young and Company Final Report-Executive Summary is at TAB B. A copy of the complete report is available in my office.

From the foregoing, we recommend that: (1) testing of the capitation budget methodology and the regional resource management scheme be terminated and that the manpower and dollar resources supporting the test be withdrawn at the close of FY 1981; (2) management flexibilities be pursued for possible

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[1]Source: Assistant Secretary of Defense (Health Affairs) Memorandum for the Deputy Secretary of Defense, same subject, p. 1-2, undated.

integration into the traditional PPBS; and (3) appropriate Congressional notifications of our decision be made by 1 May 1981 in response to their request.

JOHN H. MOXLEY, III, M.D.

2 TABS
1. Capitation Budgeting Evaluation
2. Arthur Young Final Report-Executive Summary

APPROVE _____ COORDINATION: ASD(C) _____

DISAPPROVE _____ ASD(MRA&L) _____

APPENDIX B

Health Maintenance Organizations[1]

CURRENT KNOWLEDGE

Private Sector Research

The paucity of Medicare and Medicaid beneficiaries enrolled in HMOs has yielded a commensurate dearth of research on cost, utilization, marketing, and quality of care delivered to the poor and elderly in HMOs. To date, most of the research on HMO performance has been based on private sector data, particularly from a small number of HMOs which have consistently participated in research studies. This research has produced some generally accepted conclusions about HMOs, as well as some clear indications about where more study is needed. The following section consists of a brief review of the state of the art, focusing on those aspects of research which are relevant to Medicare and Medicaid involvement in HMOs.

UTILIZATION AND COSTS

From his exhaustive assessment of the available literature on HMOs, Harold Luft concluded that members of staff model HMOs/prepaid group practices (PGPs) have the lowest costs, as compared to members of independent practice associations (IPAs) and major medical-indemnity plans.[2] Luft determine that annual costs for Blue Cross/Blue Shield subscribers were 16 to 88 percent higher than for enrollees in the lowest cost PGPs. In addition, average out-of-pocket costs per person and per family for HMO enrollees were less, particularly in staff as opposed to IPA models. We do not know, however, whether these cost differences represent true cost savings because of the self-selection factor. That is, those who choose to enroll in an HMO may be different from the general population on one or more parameters which have a proven correlation to the use of health care. HMO enrollees may be healthier, or they may seek less health care, regardless of their health conditions.

The chief means by which HMOs control costs is reduced hospitalization. Luft found that in 44 of the 57 comparisons of HMO to fee-for-service experience, dating back to 1951,

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[1]Source: HMOs: Issues and Alternatives for Medicare and Medicaid, DHHS, HCFA, p. 5-7, April 1981.

[2]Luft, H.S., Health Maintenance Organizations: Dimensions of Performance (A Wiley-Interscience Publication: John Wiley & Sons, New York), in publication.

HMO enrollees had fewer hospital days than the comparison group. In 46 cases, the admission rate was lower. HMOs do not appear to have a significant effect on length of stay (LOS). Out of the 57 cases, 30 showed lower LOS, six were the same, and 21 were higher. Case-mix adjustments do not alter this finding. Overall, the utilization of staff model HMOs is about 35 percent less than comparison groups, while IPAs are about 5 to 25 percent lower. As to whether these results are associated with self-selection, the evidence is mixed. Some studies indicate that those likely to be high users tend to opt for conventional health insurance plans. On the other hand, some argue that persons who anticipate a high need for health care are more likely to choose an HMO.

Studies about the relationships of HMOs and ambulatory care are less conclusive than those about hospitalization. The HMO rhetoric frequently refers to the substitution of less expensive outpatient care. But more study is needed to understand the dynamics of this: Do HMOs eliminate unnecessary care, do they underserve, do they selectively enroll, or do they substitute ambulatory care? The only sure conclusion which Luft could draw from his analysis was that a larger proportion of HMO enrollees have at least one visit per year compared to non-enrollees. He also was reasonably confident that, while HMO enrolless have more ambulatory visits per year than people in comparison groups, the difference is less than 10 percent, and nearly as many HMOs show fewer visits per year as show more. The actual extent of substitution of physician visits and ancillary services for inpatient care is not known.

PREVENTION

One of the chief benefits that HMOs claim is that they respond to incentives to provide preventive care because in doing so they save the costs they would have otherwise incurred for acute care. But studies comparing the use of preventive services by HMO enrollees and non-enrollees produce conflicting results. Contrary to popular expectation, non-enrollees used preventive care more or as much as HMO enrolless in four out of 11 studies analyzed by Luft. The explanation appears to be that demand for preventive services is more a function of coverage than provider philosophy.

Analysis of preventive care is beset by some thorny problems, such as defining preventive care and understanding the role of the physician in his or her choices of services. Furthermore, intuitive assumptions that preventive care is always good are subject to challenge in terms of efficacy as well as economic costs and benefits. However, two perspectives are available from which to consider the provision of preventive services in HMOs. From the HMOs perspective, there are clear economic incentives to discourage the unnecessary provision of

discretionary, preventive services; from the enrollee's perspective, the elimination or reduction of out-of-pocket costs for ambulatory care appears to act as an incentive to seek preventive services. The value and appeal of preventive care to the elderly has received little, if any, research attention to date. Assuming prevention is valuable, we have very little information about current utilization of such services by Medicare beneficiaries or how more comprehensive coverage would affect utilization.

QUALITY

Two comprehensive reviews of the literature on quality of care delivered by HMOs have been performed.[3,4] Both recognize that the state of the art limits the certainty of conclusions, and both exonerate HMOs in general from the allegation that they underserve enrollees to achieve economies.

The first review, by Luft, is organized onthe basis of structure, process, and outcome studies. With regard to structure, Luft concludes that HMOs are at least as good as fee-for-service: HMOs seem more likely to recruit and attract more certified specialists (although the superiority of such credentials is unproven), admit to accredited hospitals, and provide more continuing education to their staff. On the other hand, arguments that physicians in HMOs more frequently consult with each other was not supported by Luft's review. Luft also found that while internal peer review is present in most HMOs, it is not found in all of them. Where information on quality is available, it is not clear whether it is used or is effective in instituting improvements.

The relationship of the process of care to quality is nearly as tenuous as the relationship of structure to quality. Luft makes the point that assessments of quality delivered in HMOs based on process measures are easily biased in favor of settings which keep good records and offer an array of technical services. Thus, HMOs appear to do better on process measures which pick up lab tests and procedures, but this could be more due to coverage than quality differences. Studies based on HMO outcomes are quite few and of limited value due to small sample sizes. However, the preponderance of what is available suggests that HMO outcomes are not significantly different than fee-for-service.

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[3]See Footnote 2.

[4]Cunningham, F.C. and J.W. Williamson, "How Does the Quality of Health Care in HMOs Compare to That in Other Settings? An Analytic Literature Review: 1955 to 1979." The Group Health Journal, Winter 1980, pp. 4-13.

The conclusions of the second review, by Frances C. Cunningham and John W. Williamson, are more positive than Luft's. The authors analyzed 25 studies in which they identified 34 different measures of quality (seven outcome, 25 process, and two structure). The studies reported a total of 84 quality measurements, of which 65 were considered valid for this review. Of the 65 measures, care provided by HMOs appeared superior in 50 cases, similar in 14, and inferior in one (a Medicaid population). The authors concluded that the quality of care provided by HMOs is comparable, if not superior, to conventional settings.

ENROLLMENT, SATISFACTION, AND DISENROLLMENT

The literature on satisfaction reviewed by Luft indicates that HMO enrollees are more satisfied with their financial coverage than non-enrollees. Thus, while a person who chooses HMO enrollment because of its better financial coverage may subsequently disenroll because of dissatisfcation with something else, financial coverage remains a key means to motivate enrollment. The significance of this for Medicare and Medicaid is that these programs can do little within their current authority to motivate enrollment via financial incentives.

Aside from economic incentives, studies about why people choose HMOs focus on their feelings about the care they receive, out-of-plan utilization, and disenrollment. Luft calls the latter two "behavioral correlates of satisfaction." Overall, Luft found that out-of-plan utilization accounts for 7 to 14 percent of all services received by HMO enrollees. Outside users are the ones who most frequently express dissatisfaction in surveys. The percentage of those who disenroll annually is usually under 10 percent. Curiously, some plans with the lowest disenrollment rates do more poorly in measures of consumer satisfaction than plans with less stable enrollment. Hirschman has shown that HMO enrollees are generally more informed consumers, and as such, they may be more vocal in their complaints.[5] Nevertheless, even the complainers usually do not disenroll, probably because they enjoy the coverage they receive at a reasonable premium.

Since the Medicaid and Medicare programs cannot offer financial savings to encourage beneficiaries to join HMOs, it is important to consider what other factors might motivate enrollment. These factors might include certain benefits which HMO members presumably enjoy, such as better accessibility. Luft found that while HMOs offer shorter office waiting times, waiting times for appointments are longer. For elderly people with urgent needs who visit the doctor frequently, this could be a

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[5]Hirshman, A.O., Exit, Voice and Loyalty: Responses to Decline in Firms, Organizations and States. (Cambridge: Harvard University Press), 1970.

significant deterrent to HMO membership. For the low income person, this may be less important than simply having a health provider in the vicinity who accepts Medicaid patients.

Continuity of care is often assumed to be more readily available to HMO members. The empirical benefits of continuity of care are by no means clearly defined; however, there is some consensus that continuity is a necessary component of quality. Without the availability of a longitudinal medical record and/or a physician who knows the patient, it is presumed that effective prevention, identification, and treatment of disease cannot be achieved. It appears that HMOs provide less opportunity for members to identify with a personal physician but possibly better maintenance of medical records.[6] Self-selection may partially account for this if HMOs automatically attract people who have and seek no personal physician relationship. By the same token, however, many elderly persons highly value this relationship. Unless the HMO offers an appealing substitute to their current doctor, they may not enroll. Furthermore, since the evidence shows that HMO enrollees are less satisfied with doctor-patient communication and relationships, disenrollment among the elderly may prove higher.

SUMMARY

With minimal equivocation, researchers attribute HMOs lesser costs to reductions in hospitalization. To what reduced hospitalization should be attributed, however, is part of an important controversy about self-selection which is discussed elsewhere in this report. The effect of HMOs on the use of ambulatory and preventive care has less consensus than HMOs' effect on inpatient use, due in part to the wide variety of services encompassed by ambulatory preventive care. One can find studies which argue that HMOs provide more or less of such services. But the theory that HMOs provide more to prevent future illness is treated with increasing skepticism. To the extent that quality of care lends itself to measurement, no consistent evidence of lesser quality in HMOs has yet been produced, while there is some research suggesting that HMOs may offer improved quality over fee-for-service medicine. Studies about consumer attitudes on health insurance show that HMO enrollment affords more satisfaction with financial coverage than do fee-for-service plans. Other factors which may play a role in HMOs attracting and retaining members are accessibility and continuity of care.

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[6] Richardson, W.C., S.M. Shortell, P.K. Diehr, "Access to Care and Patient Satisfaction," in William C. Richardson, (editor), The Seattle Prepaid Health Care Project: Comparison of Health Services Delivery, Seattle: University of Washington, School of Public Health and Community Medicine, 1976.

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